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**Why Do People Disclose Themselves  
in Social Networking Services?: A Study of Factors  
Affecting on Self-Disclosure on Facebook**

페이스북상에서 사용자의 자기개방에

영향을 미치는 요인에 대한 연구

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박 향 희

# **Why Do People Disclose Themselves in Social Networking Services?: A Study of Factors Affecting on Self-Disclosure on Facebook**

Hyanghee Park

College of Business Administration

The Graduate School

Seoul National University

Self-disclosure is any message about the self that a person communicates to another in the formation of relationship building on OSNs. Self-disclosure plays an important role in forming interpersonal relationships in a virtual space where individuals try to make new relationships with others. Drawing on Social Exchange Theory and Theory of Planned Behavior, this study theoretically articulates and empirically tests a model positing that perceived benefits and risks affect OSN users' self-disclosure. Results indicate that perceived benefits (perceived enjoyment, relationship management, showing off, and social influence) and perceived privacy risks play a significant role on OSN users' self-disclosure. This study provides implications for both research and practice in that it can give better insights into how individuals' perceived benefits and risks can affect their self-disclosure. This study also finds that OSN users tend to disclose themselves after calculating rewards and costs of self-disclosure although they are aware of the privacy risks.

Keywords: Self-disclosure, Privacy Concern, Privacy Calculus, Social Networking  
Service

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# CHAPTER 1 INTRODUCTION

Online social networking websites provide publicly accessible meeting spaces where people can build relationships, share information, show their interests to other users. Nowadays, a number of people spend tremendous time using SNSs such as Facebook, Twitter, Instagram, and etc. Different from the past behavior of Internet users, SNS users are not only consuming information on the internet, but producing and generating lots of contents as well. Users now play a large role in generating web contents which are opened to the crowd by writing daily events in a blog, making a podcast, or building a virtual identity on a social networking site. Social networking websites and the technology make it possible to create streams of text, photos, and videos ranging from the funny and silly (e.g. YouTube videos of pets) to the profound (e.g. raw video of conflict in the Middle East) (Treese 2006). These sites have created a new medium for public self-expression that not only allows people to connect with others who share an area of interest, but also possesses the power to potentially share public opinion, drive commerce, and change society (Pike 2009).

Since it became easier to create various contents in a different form, users tend to be less reluctant to disclose their identities and share their personal information with other users. In recent years, there have been numerous studies applying self-disclosure theories developed in the psychology literature (Andrade, Kaltcheva, & Weitz, 2002; Jacobs, Hyman, & McQuitty, 2001; Moon, 2000, 2003; White, 1999). A common feature of this research is the basic assumption that consumers are reluctant to disclose personal information about themselves because of privacy



issues (Kelly & McKillop, 1996). Because of these tendencies, consumers tend to disclose or not disclose personal information demanded by the company based on their assessment of the costs and benefits associated with providing such information.

Today, voluntary self-disclosure can be seen very easily on individuals' web logs (blogs) (Lee et al, 2008). It is interesting that SNS users try to self-disclose by putting up a picture of themselves and showing their profile to the public, though, at the same time, they are concerned with a possibility that their personal information can be seen by the anonymous or be stolen by the third parties.

The purpose of this study is to explore some of the factors that make SNS users perceived to gain benefits in self-disclosure and as well as to find out what makes them concerned with publicizing their personal information in OSN. The specific research questions investigated are: (1) How do SNS users make decisions to disclose themselves in social network services? (2) What are the factors of privacy concerns and benefits of self-disclosure? (3) Does Perceived Publicness have an influence on Perceived Likelihood, Perceived Damage, and Privacy Concerns?

This paper proceeds as follows: Chapter 2 introduces the theoretical background of this study. Chapter 3 outlines the research model and hypotheses. Chapter 4 details the research methodology and data collection procedures. Chapter 5 presents the data analysis and hypotheses testing results. Finally, the findings of this study and its implications are provided in the last chapter.

## CHAPTER 2 THEORETICAL BACKGROUND

### 2.1 Self-Disclosure

Self-Disclosure is defined as “any message about the self that a person communicates to another” (Wheless and Grotz, 1976, p. 47). In the study of verbal communication (Jourard and Lasakow, 1958, p. 91), self-disclosure refers to as the “process of making the self known to others”. Self-disclosure is individuals’ main behavior presented in the process of developing and managing interpersonal relationships (e.g. De Vito, 1986; Nakanishi, 1986; Laurenceau et al., 1998; Jourard, 1971) since it has a significant effect on the development of trust and gives them back with a social reward which foster relationship building (Worthy et al., 1969).

In particular, self-disclosure can be applied to the specific context of OSNs, since it plays an important role in forming interpersonal relationships in a virtual space where individuals try to make new relationships with others. Revealing an online identity, or profile is a key characteristics of using OSNs (Boyd and Ellison, 2007). When creating an account, individuals are required to send their information such as name, email address, gender, and birthday. Users are often encouraged to display their work and contact information on their profile as well. The information presented on profile is not limited to the basic personal information but to highly private information such as current location, political preference, religion, relationship status, sexual preference. Generally, users are able to reveal additional personal information about themselves such as general interests, entertainment interests, pictures, and videos if they want. All of these OSNs’ functions, either

directly or indirectly, allow users to publicly self-disclose information as they use them. Moreover, Today's trend and self-disclosure encouraging environment makes it natural to put up one's own photo and reveal their location and share news on friends' timeline without concerning their privacy.

## 2.2 Social Exchange Theory

According to Social Exchange theory, by evaluating rewards and costs, people make a decision whether to develop interpersonal relationships with others or not. This is due to the fact that people who give much to other try to receive much from them, and people who receive much from others feel obligated to give as much as they receive. In other words, if the exchange seems to be advantageous, then the person takes action to enter into an exchange relationship (Dwyer et al, 2007).

Homans (1958) states that social behavior is an exchange of goods, material goods but also non-material ones, such as the symbols of approval or prestige. He later defined social exchange as "the exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons" (Homans and George, 1961).

In the context of online social networking sites, OSN users decide if they will open themselves in public or not by assessing the rewards and costs. Privacy Calculus Theory has been developed, based on Social Exchange Theory, by arguing that some users perceive that the rewards for self-disclosure offset the costs of publicizing their private information in OSN. In this regard, privacy loss is viewed

as the cost of gaining desired benefits (Hui et al., 2006). Privacy and the self-disclosure of personal information is observed from an economic angle in the theory of privacy calculus (Xu et al, 2013). For example, Klopfer and Rubenstein (1977) considered privacy as one's right which can be exchangeable for more value. Based on the research, numerous studies begin to understand that individuals are determined to behave in a certain way after evaluating the risk and return (Culnan et al, 2000 and Milne et al, 2004). Xu (2009) argued that the benefit that a person perceives must be higher than the risk in order to guarantee the motivation of self-disclosure. Laufer and Wolfe (1977) contended that a calculus of behavior, explaining situational restraints such as social norms of appropriate behavior, desired benefits, and unexpected consequences, is a significant predictor of when and whether people would open their personal information. They (Laufer and Wolfe, 1977) further contended that an important component of the calculus of behavior is that individuals are often not able to foresee what has to be managed. In other words, individuals' subjective belief or judgment can affect their intention behavior which ultimately decides whether they will disclose their personal information or not.

Dealing with the benefits side in an interpersonal aspect, Joinson and Paine (2007) contend that the benefits of an interpersonal relationship, such as trust building, mutual empathy and reciprocation, often exceed the risks of self-disclosure relevant to high vulnerability. In the context of E-commerce, Hui et al. (2006) explain that online companies can persuade users to disclose their personal information including users' preferences, financial figures, and contact details by providing them with extrinsic (e.g. time savings, convenience, self-enhancement) and intrinsic (e.g. Pleasure ) benefits. Although there has been no numerous studies that systematically

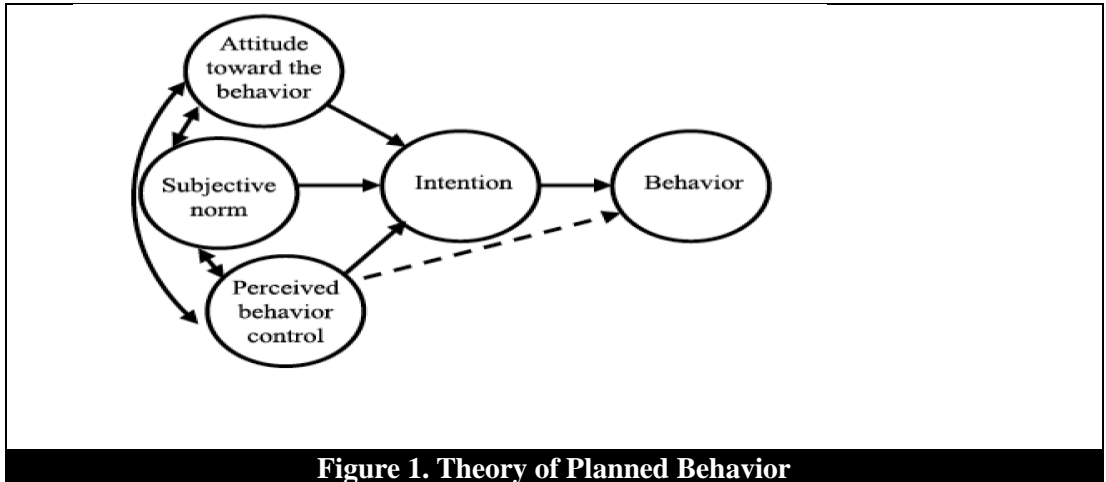
explain the benefits of self-disclosure on OSNs, early research indicates that enjoyment (Rosen and Sherman, 2006; Sledgianowski and Kulviwat, 2008), self-presentation (Boyd, 2007) and the ability to maintain social ties (Ellison et al., 2007) may all lead to user engagement and self-disclosure.

Several studies have shown that users' willingness to engage in an online transaction has a negative influence on their perceived privacy risks (e.g. McKnight et al., 2002b; Pavlou, 2003; Malhotra et al., 2004). Krasnova et al (2009) demonstrates that there is a significant relationship between Privacy risks and self-disclosure, illustrating that users try to consider privacy risks when they make a decision to disclose themselves. On the other hand, Acquisti and Gross (2006) find a nonsignificant relationship between privacy concerns and self-disclosure on OSNs. The authors explain that it is due to the fact that users trust OSN providers and their OSN friends and believe that they can control access to their own personal information.

## 2.3 Theory of Planned Behavior

A large number of researchers in Social Science has put a tremendous amount of effort in trying to find out the predictors of individual's behavior. Theories such as the Social Cognitive Theory (SCT), the Theory of Reasoned Action (TRA), and the Theory of Planned Behavior (TPB) are the examples that show that researchers have tried to explain individual's behavior more precisely. Numerous research concentrating on behavior related to information technology have been studied on

the basis of the theory of reasoned action (Ajzen and Fishbein 1980) and its later revision, the theory of planned behavior (TPB) (Ajzen 1988).



Lee (2009) added perceived risk and trust into TPB to explain online transactions with acceptable results. This demonstrates that, by combining with certain characteristics in social networks, the TPB model can also be used to give an explanation of the self-disclosure of private information by OSN users.

The model shown in this paper is specified by concentrating on two of the main components of the TPB models, namely beliefs and behavior intention. In particular, it is investigated how individuals' beliefs affect their behavior to disclose their private information in OSN.

This study tries to have a better understanding of two contrasting beliefs that individuals have in their mind when they are about to disclose their private information in OSN. It is assumed that the salient beliefs that have a positive or negative impact on the intention to open the private information to use OSN, can be

contrasting. Thus, the beliefs consist of a set of components in a calculus, or decision making process, in which the OSN users engage when they are about to disclose their private information. The one salient belief might override another to the extent that individuals' behavioral intention takes up the whole belief over another. However, despite the strength of the overriding belief's influence, the role of the contrasting belief is still important. In the model described in this study comprises of contrary elements since it is common for users to have strong beliefs about each one at the same time.

## CHAPTER 3 METHODOLOGY

Based on the research model developed by Krasnova et al (2009), this study develops a series of hypotheses to examine how the factors of both privacy concerns (which comprise of perceived publicness, perceived likelihood, and perceived damage) and benefits (which comprise of perceived enjoyment, relationship management, showing off, and social influence) affect users' voluntary self-disclosure in online social networking sites. In the light of previous research and the nature of voluntary self-disclosure behavior, the following research model and ten hypotheses are formulated.

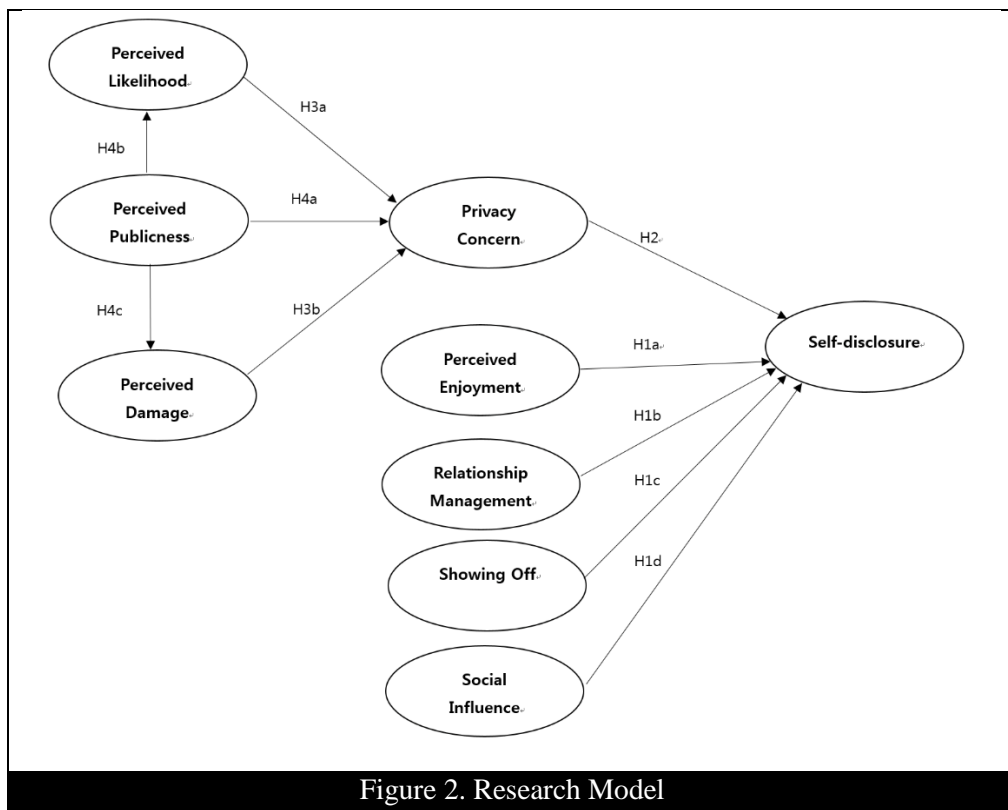


Figure 2. Research Model



## 3.1 Perceived Benefits of Self-Disclosure on OSNs

### 3.3.1 Perceived Enjoyment

Perceived enjoyment is defined as “the value users derive from having pleasant and enjoyable experiences on OSNs” (Krasnova et al, 2010). Muniz and O’guinn (2001) suggests that users enjoy having a conversation with other users in online communities. Hui et al. (2006) address that, by providing pleasure and enjoyment, service providers can attract voluntary participation from users or make them unconsciously disclose their personal information. Rosen and Sherman (2006) consider OSNs as completely hedonic platforms, contending that enjoyment is a more significant predictor than perceived usefulness. Similarly, Lee (2008) argued that informants in the focus group showed that they have fun and spend an enjoyable time disclosing themselves.

The private space on the internet provides users a plenty of opportunities for self-disclosure such as photos, likes, preferences in music, movies, and books. Because of the characteristics intrinsic in OSNs, users can easily enjoy and take pleasure in showing their interests and private things on OSNs. Since users enjoy OSN functions such as pressing the like button or showing their preferences in various activities, it is not surprising that more than 70% of Facebook users participate in platform functions which reveal their private activities and personal information (Facebook.com 2009). Krasnova et al. (2009) and Sledgianowski and Kulviwat (2008) found that OSN users’ participation and self-disclosure is related to enjoyment benefits offered by the OSN. Thus, the hypothesis is as follows:

*H1a. The benefits of perceived enjoyment will have a positively influence on self-disclosure.*

### 3.3.2. Relationship Management

Making and maintaining interpersonal relationships with others is one of the benefits that individuals pursue when they use online social networking sites. Moreover, Lee et al. (2008) argued that individuals are willing to disclose themselves to have a good relationship with someone who they are close to. Shiffman et al. (2003) found that users who participate in chatrooms or message boards often tend to perceive more values of being respected and having close relationships with other people.

Homans (1958) claimed that OSNs offer users an opportunity to maintain a close interpersonal relationships without spending too much time. By the benefit of OSNs different from traditional communication tools such as email, messenger, it became easier and more convenient to spread their ongoing activities, news, and updates to their friends or acquaintances. Hui et al. (2006) found that, in the context of E-commerce, time savings are important in that it can motivate users to reveal their personal information. In this regard, OSN users can also reveal their private activities and personal information in order to maintain their interpersonal relationships with others more conveniently.

According to social penetration theory, it is proposed that, as relationships

develop, individuals' conversations become deeper and more intimate Griffin (2011). Psychologists Irwin Altman and Dalmas Taylor (1973) developed this theory to explain how close two individuals are. The basic assumption of the social penetration theory is that individuals build a close relationship with another through self-disclosure and the intimacy increases if two of individuals share their private things through self-disclosure. Finally, the relationship moves from shallow to deeper and intimate levels. Altman and Taylor (1973) suggest that only through disclosing one's self another by being vulnerable to the person can a close relationship develop. Ellison et al. (2007) argue that, in the context of OSNs, users develop new weak ties as well as maintain already-established ones by disclosing one-self. Thus, the second hypothesis is as follows:

***H1b. The benefits of relationship management will have a positive influence on self-disclosure***

### 3.3.3. Showing Off

Since OSNs provide users with an opportunity to present their distinct identity, popularity, ability, daily events, appearance, education, and so on. OSNs are sometimes used by users to show off such things on purpose. Lee (2009) argued that showing off is one of the main motivations to open one's private things. Similarly, Walther (1996) finds that, on OSNs, users try to build a good self-impression by choosing to show only the good part of one's self and what they are

good at. Krasnova et al. (2010) address that, since people have a desire to look good and present themselves in a good way, OSN users often show their abilities, experiences, achievements on their timeline and even participate in groups they regard attractive. Krasnova et al. (2008) show that benefits of presenting ones' advantage positively affect platform participation. Therefore, the hypothesis is as follows:

***H1c. The benefits of showing off will have a positive influence on self-disclosure.***

#### 3.3.4 Social Influence

Social influence is defined as the degree to which an individual perceives that important others believe he or she should use the system (Venkatesh et al., 2003). Social influence is represented as subjective norm in TRA, TAM, and TPB. Thompson et al. (1991) used the term social norms in defining their construct, and acknowledge its similarity to subjective norm within TRA. While they have different labels, each of these constructs contain the explicit or implicit notion that the individual's behavior is influenced by the way in which they believe others will view them as a result of having used the technology. The role of social influence is complex and subject to a wide range of contingent influences. Social influence has an impact on individual behavior through three mechanisms: compliance, internalization, and identification (Venkatesh and Davis 2000; Warshaw 1989).

While the latter two related to altering an individual's belief structure and or causing an individual to respond to potential social status gains, the compliance mechanism causes an individual to simply alter his or her intention in response to the social pressure- i.e., the individual intends to comply with the social influence. Prior research suggests that individuals are more likely to comply with others' expectations when those referent others have the ability to reward the desired behavior or punish nonbehavior (e.g., French and Raven 1959; Warshaw 1980).

Social influence can be applied to the specific context of OSNs in terms of self-disclosure. Individuals tend to disclose themselves when others do the same or expect them to reveal personal information. Lee et al. (2008) found that blog users disclose their personal information in order to keep up with trends. This phenomenon is prevalent in the context of OSNs, since most of the young users open their information and show themselves due to peer pressure. Thus, it is hypothesized as follows:

***H1d. The benefits of social influence will have a positive influence on self-disclosure.***

## 3.2 Perceived Risks of Self-Disclosure on OSNs

### 3.2.1. Privacy Concerns

Xu et al. (2013) define privacy concern as the users' concern about threats to

their privacy online. There has been numerous studies that demonstrate the effect of privacy concerns on providing personal information in the context of OSNs (Chellappa and Sin, 2005; Malhotra, Kim and Agarwal, 2004). In the previous research, privacy concern is regarded as one of the most important elements of privacy issues. Hogben (2007) addresses that OSN privacy risks range from organizational threats such as e.g. personal data collected by the unknown to dangers caused by the user social environment such as online stalking, blackmailing, cyber violence or defamation.

Paine et al. (2007) argue that privacy concern is not merely the immediate response to security of privacy but a motivator for users to protect their personal information. Furthermore, Sheehan et al. (1999) demonstrate that users highly-concerned with their privacy tend to conceal their personal information from an online social networking site. Gross and Acquisti (2006) find that users even fill out the profile with wrong information to prevent their information from being collected and controlled by the unknown. Since users, nowadays, tend to view OSNs as public internet space and recognize that negative thing sometimes happen without their knowledge, there is a possibility that they are concerned with the possibility that their personal information can be collected and exploited by the third parties. Therefore, I hypothesize:

***H2. Privacy concern will have a negative influence on self-disclosure***

### 3.2.2. Perceived Likelihood

Krasnova et al. (2009) explains that perceived likelihood originally refers to the subjective probability that a negative event will happen and corresponds to the concept of “susceptibility” used in the Health Belief Model often used to anticipate the degree of the preventive behavior.

Individuals subjectively evaluate the likelihood of negative events because of the so-called optimistic bias. Higgins et al. (1997) found that individuals are inclined to percept negative events a less likely and positive events a more likely to take place to them. Campbell et al. (2007) argue that this perception is described as “it won’t happen to me” attitude and might be seen in many aspects of human behavior, such as Internet events. Such individuals’ perceptions can be distorted due to their personality characteristics of egocentricity (Higgins et al. 1997). Although it can be useful in managing their stressful situation, unreasonable optimistic bias can have a negative influence on individuals by stopping their precautionous behavior. As a result, negative events might really take place due to their careless behavior. In the context of OSNs, the “it won’t happen to me” situation can indeed account for tremendous self-disclosure and information revelation in spite of the privacy threats.

According to the studies of Acquisiti and Gross (2006) and Strater and Richter (2007), it has been demonstrated that users are not able to thoroughly evaluate the real controllability of their profile and personal information. Moreover, they further explain that users cannot truly understand the legal consequences described in the OSN privacy policy. Users tend to have false ideas and misconception on their personal information and privacy rights due to the lack of knowledge. In other words,

many individuals misjudge the possibility and likelihood of privacy abuse happening to them. To understand how perceived likelihood can affect individuals' privacy concern, I hypothesize:

***H3a. Perceived likelihood of privacy threats will have a positive influence on privacy concern.***

### 3.2.3. Perceived Damage

Krasnova et al. (2009) explains that perceived damage refers to the individual evaluation of the magnitude of a negative event and its effect. In the previous studies (Harrison et al, 1992) on health-related behavior, it has been shown that there is a small but significant impact of this construct on individuals' behavior. The damage that individuals perceive might be different ranging from psychological and social damage (e.g. social standing, relationships, or employment) to financial damage (e.g. financial loss) as a result of identity theft, cyber stalking, bullying, etc. Janz and Becker (1984) stress that awareness or perception of damage exceedingly depends on individuals' personality and culture. The more individuals perceive the extent of damage as a result of negative events such as access to personal information by the third parties, online stalking, and blackmailing, the more concerned they would be with their privacy. Thus, the hypothesis is as follows:

***H3b: Perceived damage from privacy will have a positive influence on privacy concern.***



### 3.3.4 Perceived Publicness

Most of the OSN users consider social networking sites as a public space in that the anonymous can generally have an access to others' profile, personal information, posts, and pictures online. Dahlberg (2001) argued that the Internet had the possibility to provide a new public sphere online. The Internet is actually becoming more public due to the development of sociotechnical websites which give users a great opportunity to build their own online identities and to record their daily lives and events. These new public environments, called "virtual public," are quite transparent and unclosed in that it enables individuals to participate and lead to online interpersonal relationships (Aarseth 1997; Carter 2005; Jones and Rafaeli 1999; Papacharissi 2002).

The concept of publicness is first introduced in the study of Goffman (1963) comparing public presentation to a performance on a stage for the public. However, other studies (Slevin, 2000; Thompson, 1996) argued that Goffman's image of publicness doesn't fit to mass communication media and web technologies presenting that the publicness of the internet is quite different from the one that Goffman described. Slevin (2000, p. 182) contended that today's publicness requires people "using communication media to make information and their points of view visible and available to others" whereas the old definition of publicness need two individuals in the same place at the same time. The main difference between Goffman's and Slevin's definitions of publicness is the performer's perception of the degree of access owned by the audience to the information presented. When a large number of audiences are at the same place together, the performer perceives that they

have unlimited access to his or her speech or behavior. However, on OSNs, performers may, or may not aware the existence of the crowd who have the unrestricted access to his states or actions. Moreover, different from the physical spaces, the online users misjudge the publicness because they cannot actually observe the people who have unlimited access to their information (Goffman 1963 and Slevin 2000). Today's OSNs provide a new and public virtual space where a variety of people can open their personal information which is available, tangible, searchable, usable and have an invisible audience (Boyd and Ellison, 2007).

One of the main characteristics of OSNs is that users voluntarily divulge their personal information such as profile, preferences in music, movies, books, etc. However, in the previous research on self-disclosure (e.g. Cialdini, 1993; Kelly and Mckillop, 1996; Lane and Wegner, 1995), it has been demonstrated that users generally avoid to reveal their information. Petronio (1991, 2000, 2004) argue that people try to balance between their desire for self-disclosure and vulnerability. Similarly, individuals decide what they are going to disclose to others or not before revealing their personal information (Goffman, 1963; Petronio, 1991; Petronio, 2000; Petronio, 2004). This is due to the fact that users aware that self-disclosure can lead to a dangerous situation resulting in a big loss such as reputational, financial, social damage.

Self-disclosure in OSNs is a new kind of communication engaging in a virtual online space and a mass of unknown users. Goffman (1963) and Slevin (2002) argue that self-disclosure online is prevalent since user-created content is easily accessible to the general public. Yet, since users who disclose themselves cannot perceive the existence of the audiences or see them with their eyes, they are becoming more

concerned with self-disclosure (Dwyer et al., 2007). Moreover, the contents that users provide online may be collected and stored within OSNs. Accordingly, the information created online can be searched and read for an unlimited length of time by unknown people. For that reason, information providers may not be able to protect their self-disclosure in a virtual space where the trustworthiness and morality of other who have access to information is not guaranteed (Ware, 1984). Users with profiles in OSNs tend to take risks of being accessible from the unknown audiences, whereas most of the individuals try to manage vulnerability and loss of face (Fogel and Nehmad, 2009; Petronio, 2000). Derlega et al. (1993) contend that individuals become more concerned with their information if they aware too much vulnerability after their voluntary self-disclosure. In this regard, the more OSN users perceive publicness of OSNs and general information created online, the more they will be aware of the danger of self-disclosure. Therefore, users who consider OSNs as a public space will tend to protect their personal information due to the elevated risk and concerns. Thus, the hypothesis is as follows.

***H4a. Perceived publicness will have a positive influence on privacy concern.***

***H4b. Perceived publicness will have a positive influence on perceived likelihood.***

***H4c. Perceived publicness will have a positive influence on perceived damage.***

## CHAPTER 4 RESEARCH METHODS

### 4.1 Operationalization of Constructs

The research constructs used in this study were measured using operationalized constructs confirmed reliability and validity in previous studies. Existing scales were used wherever possible. However, due to specific context of this study, some of the scales had to be modified. A few new items were added to the constructs based on previous research. The measure were slightly revised to apply to the context of this research and were translated to Korean from English when it was needed. A pretest of the questionnaire was conducted and a pilot test was performed involving two Ph.D. students, eleven master students, and fourteen randomly selected people. Table 1 shows the operational definitions and sources of included variables.

Perceived enjoyment was measured with four item-scale adapted from Lee et al. (2009). It focuses on how enjoyable it is to reveal personal information on OSNs. Relationship management was assessed with three items based on Lee et al. (2009). The items measure if OSN users disclose their personal information in order to manage their interpersonal relationships with others. Showing off was measured with three items adopted from Lee et al. (2009). It assessed the need of users' self-disclosure to show one's own popularity, ability, and so on. Social influence was also adopted from prior study (Venkatesh et al, 2003), with four items to measure the herding and peer pressure of the self-disclosure.

Privacy concern was measure with four items based on Dineve and Hart (2006).

The items measure how concerned users are with the possibility that their personal information disclosed on Facebook can be used in a way they do not foresee. Perceived likelihood was measured with four items adapted from Dineve and Hart (2006). It focuses on the likelihood of negative events which can be described as personal information collected and used by the unknown. Perceived damage was assessed with four items adapted to reflect an individual's perception of magnitude of damage as a result of self-disclosure. Perceived publicness was also adapted from prior research (Bateman et al. 2010), with four items to measure an individuals' perception of publicness of OSNs and information disclosed on the platform.

Finally, the dependent variable, self-disclosure was assessed with four items based on Tschersich et al. (2013) and it measures one of the main attributes of self-disclosure, amount. In other words, the items asked how much users would disclose their personal information on Facebook. To avoid any misunderstanding of the word, "self-disclosure," and clarify the meaning of the word, the exact definition of self-disclosure which fits to the unique context of this study was given on the questionnaire. Existing scales were used wherever possible. However, due to specific context of this study, some of the scales had to be modified.

All of the items were measured on a seven-point Likert scale, anchored by "strongly disagree" (1) to "strongly agree" (7). Table 2 summarizes the constructs used in this study and their operationalization.

Table 1. Operational Definition of Research Constructs

Construct (Abb.)		Operational Definition	Reference
	Self-Disclosure (SD)	The degree of the amount of self-disclosure and the amount of time spent on revealing personal information on Facebook.	Krasnova et al., 2010
Benefits	Perceived Enjoyment (PE)	The extent to which the activity of self-disclosure is perceived to be enjoyable in its own right.	Carroll & Thomas, 1988; Deci, 1971; Malone, 1981
	Relationship Management (RM)	The degree of the ability to conveniently maintain and manage relationships.	Krasnova et al., 2010
	Showing Off (SO)	The degree of the need to display one's own popularity and ability.	Lee et al., 2008
	Social Influence (SI)	The degree of one's emotions, opinions, or behaviors which are affected by others	Venkatesh et al., 2003
Risks	Privacy Concern (PC)	The degree of one's concern with self-disclosure.	Hogben, 2009
	Perceived Likelihood (PL)	The subjective probability that a negative event will take place as a result of self-disclosure.	Krasnova et al., 2009
	Perceived Damage (PD)	The individual assessment of the magnitude of a negative event and its consequences as a result of self-disclosure.	Krasnova et al., 2009
	Perceived Publicness (PP)	The degree to which users believe that others have unrestricted access to their information.	Pike et al., 2009

<b>Table 2. Constructs of Measures</b>		
<b>Construct</b>		<b>Measure</b>
<b>Self-Disclosure</b>	<b>SD1</b>	My profile tells a lot about me.
	<b>SD2</b>	I frequently share personal information on my time line or on my profile on Facebook.
	<b>SD3</b>	I usually write about me on Facebook for fairly long periods of time.
	<b>SD4</b>	I often publish status messages on Facebook where I write about myself.
<b>Perceived Enjoyment</b>	<b>PE1</b>	I disclose my personal information because I enjoy it
	<b>PE2</b>	I disclose my personal information because it is fun.
	<b>PE3</b>	I disclose my personal information as a source of entertainment.
<b>Relationship Management</b>	<b>RM1</b>	I disclose my personal information to keep a close relationship with others.
	<b>RM2</b>	I disclose my personal information to let people know my current affairs.
	<b>RM3</b>	I disclose my personal information to communicate with others.
<b>Showing Off</b>	<b>SO1</b>	I disclose my personal information to show off that I am popular.
	<b>SO2</b>	I disclose my personal information to show off my ability.
	<b>SO3</b>	I disclose my personal information to show off by commercializing and publicizing my activities.
<b>Social Influence</b>	<b>SI1</b>	People around me want me to disclose my personal information on Facebook.
	<b>SI2</b>	People around me want me to disclose my personal information on Facebook so that they can know how I am doing.
	<b>SI3</b>	People around me want to know about me by seeing my personal information that I uploaded.
<b>Privacy Concern</b>	<b>PC1</b>	I am concerned that the information submitted on Facebook can be used in a way I did not foresee.
	<b>PC2</b>	I am concerned that the information submitted on Facebook can become available to someone I don't want.
	<b>PC3</b>	I am concerned that the information submitted on Facebook can become available to someone without my knowledge.
	<b>PC4</b>	I am concerned that the information submitted on Facebook can be seen by someone I don't know.
	<b>PL1</b>	The information I provide on Facebook will be used in a way I did not foresee.
	<b>PL2</b>	The information I provide on Facebook will be accessed by someone I don't want.

<b>Perceived Likelihood</b>	<b>PL3</b>	The information I provide on Facebook will be collected by someone without my knowledge.
	<b>PL4</b>	The information I provide on Facebook will be seen by someone I did not foresee.
<b>Perceived Damage</b>	<b>PD1</b>	It would cause great damage if the information that I provided on Facebook was used in a way I did not foresee.
	<b>PD2</b>	It would cause great damage if the information that I provided on Facebook was accessed by someone I don't want.
	<b>PD3</b>	It would cause great damage if the information that I provided on Facebook was collected by someone without my knowledge.
	<b>PD4</b>	It would cause great damage if the information that I provided on Facebook was be seen by someone I did not foresee.
<b>Perceived Publicness</b>	<b>PP1</b>	Facebook is open for any user to view.
	<b>PP2</b>	The information on Facebook is available to the general public.
	<b>PP3</b>	The information created by users on Facebook is available for anyone to read.
	<b>PP4</b>	The information available on Facebook is free and open.

## 4.2 Data Collection

In order to verify the proposed hypotheses, a web-based survey was conducted in November 2014. An online questionnaire was distributed among Facebook users by posting in popular groups. As a result, 244 usable observations were collected.

Data were randomly collected from people with the age ranging from teenagers to fifties who have been using Facebook which is the most widely used OSN in the world. A URL connecting to the Web survey was posted via Facebook from November 22 to 27. Heavy users of Facebook were also cordially invited to support this survey via Kakao Talk.

By the time this survey was concluded, 260 questionnaires were collected. The



exclusion of 16 invalid questionnaires resulted in a total of 244 complete and valid ones for data analysis (all from the Web survey). To attain the required statistical power for the study, Cohen's power primer (Cohen, 1992) and G\*Power 3.1.9.2 (Faul et al., 2007) were used for computing required sample size.

Table 3. Demographic Attributes of the Respondents (N=244)			
Attribute		Frequency	Percentage (%)
Gender	Female	111	45.49%
	Male	133	54.51%
Age	Under 19	46	18.85%
	20-29	157	64.34%
	30-39	27	11.07%
	Above 40	14	5.14%
Education	High School	33	13.52%
	Undergraduate	171	70.08%
	Graduate	40	16.39%
History of Use	Less than 1 year	2	0.82%
	1 years – 2 years	24	9.84%
	2 years – 3 years	61	25.00%
	3 years – 4 years	77	31.56%
	4 years – 5 years	53	21.72%
	5 years – 6 years	25	10.25%
	Over 6 years	2	0.82%
Frequency of Use (per week)	Once a week	22	9.02%
	Twice a week	14	5.74%
	Three times a week	6	2.46%
	Four times a week	10	4.10%
	Five times a week	11	4.51%
	Six times a week	7	2.87%
	Everyday	174	71.31%
Frequency of Use (per day)	Less than 10 min	45	18.44%
	10 min – 30 min	81	33.19%
	30 – 1 hour	43	17.62%
	1 hour – 2 hours	41	16.80%
	2 hour – 3 hours	15	6.15%
	3 hours – 4 hours	6	2.46%
	over 4 hours	13	5.33%
Platform used (multiple responses)	PC or Laptop	86	25.29%
	Smart phone	239	70.29%
	Tablet	14	4.12%
	Others	1	0.29%
	Information Sharing	92	18.81%

<b>Purpose of Use (multiple responses)</b>	Information Gathering	140	28.63%
	Relationship Management	167	34.15%
	Entertainment and Game	20	4.10%
	Messaging	42	8.59%
	Others	28	5.73%

Based on Cohen (1992), the recommended sample size was 147 ( $\alpha = 0.01$ , power=0.80), which are widely accepted among researchers (Robins 1998; Mazen et al., 1987), with medium population effect size (0.15). In addition, G\*Power 3.1.9.2 suggested 180 samples ( $\alpha = 0.01$ , power=0.95) for testing the research model. Thus, the total sample (N=244) exceeded the recommended sample size at  $\alpha = 0.01$  level.

## CHAPTER 5 ANALYSIS AND RESULTS

In this study, descriptive statistics, factor analysis, and testing of the measurement model and structural model were conducted using SPSS 19.0 and Smart PLS.

Partial least square (PLS) is used for measurement validation and testing the structural model. Structural equation modeling (SEM) analysis was chosen over regression analysis, because SEM can analyze all of the paths in one analysis (Barclay et al., 1995; Gefen et al., 2000)

Unlike a covariance-based structural equation modeling method such as LISREL and AMOS, PLS employs a component-based approach for estimation (Chin et al., 1999). In general, PLS is better suited for investigating the phenomenon that is relatively new and measurement models need to be newly developed and the structural equation model that is complex with a large number of latent variables and indicator variables (Urbach and Ahlemann, 2010). In addition, whereas LISREL requires a sound theory base, PLS supports exploratory research (Barclay et al., 1995; Gefen et al., 2000). Hence, this research chose PLS to accommodate the presence of a number of variables, relationships and mediation effect.

PLS provides the analysis of both a structural model (assessing relationships among theoretical constructs) and a measurement model (assessing the reliability and validity of measures) (Compeau and Higgins, 1995). This study followed many researchers' framework for assessing the measurement model and the hypotheses in the structural model examining the path coefficients.

## 5.1 Measurement Validation

The measurement model comprises of research constructs and their associated indicators (measures). Fornell and Larcker (1981) suggests that the quality of the constructs and indicators could be evaluated by assessing the internal consistency, construct, and content reliabilities and the convergent and discriminant validities of the research constructs.

### 5.1.1 Reliability

To test internal consistency reliability, one of the useful indicators is Cronbach's Alpha. It measures the degree to which the manifest variables load simultaneously when the latent variable increases (Urbach & Ahlemann, 2010). Alpha values range from 0 (completely unreliable) to 1 (perfectly reliable). A construct is considered to have adequate internal consistency reliability if the CA is greater than 0.70 in the explorative research (Cronbach, 1951; Nunally & Bernstein, 1994). Therefore, as shown in Table 4, all of the tested constructs (ranging from 0.883 to 0.973) demonstrate good construct reliability.

Table 4. Measurement Validation					
Construct	Indicator	Loading	Composite Reliability	AVE	Cronbach's Alpha
<b>Self-Disclosure</b>	SD1	0.825	0.927	0.761	0.895
	SD2	0.851			
	SD3	0.910			
	SD4	0.901			
<b>Perceived Enjoyment</b>	PE1	0.961	0.982	0.949	0.973
	PE2	0.979			
	PE3	0.982			
<b>Relationship Management</b>	RM1	0.930	0.949	0.860	0.919
	RM2	0.943			
	RM3	0.909			
<b>Showing Off</b>	SO1	0.863	0.928	0.812	0.883
	SO2	0.938			
	SO3	0.900			
<b>Social Influence</b>	SI1	0.925	0.935	0.784	0.905
	SI2	0.929			
	SI3	0.915			
<b>Perceived Concern</b>	PC1	0.931	0.971	0.892	0.960
	PC2	0.955			
	PC3	0.950			
	PC4	0.943			
	PL1	0.933			

<b>Perceived Likelihood</b>	PL2	0.924	0.948	0.820	0.926
	PL3	0.864			
	PL4	0.899			
<b>Perceived Damage</b>	PD1	0.950	0.972	0.897	0.962
	PD2	0.956			
	PD3	0.930			
	PD4	0.952			
<b>Perceived Publicness</b>	PP1	0.951	0.979	0.920	0.960
	PP2	0.966			
	PP3	0.968			
	PP4	0.951			
<b>Required value</b>	loading > 0.7		CR > 0.7	AVE > 0.5	$\alpha > 0.7$

In addition, construct reliability is calculated using composite reliability (CR) scores provided by PLS. Alternative to Cronbach's Alpha, composite reliability allows indicators to be not equally weighted (Urbach & Ahlemann, 2010). Values must not be lower than 0.60. Proposed threshold value for explorative research is:  $CR > 0.70$  (Werts et al., 1974; Nunally & Bernstein, 1994). As shown in Table 4, all of the tested constructs (ranging from 0.927 to 0.982) are considered having adequate reliability.

Table 5. AVE and Correlations among Latent Constructs									
	PD	PE	PL	PP	PC	RM	SD	SO	SI
PD	0.947								
PE	-0.120	0.974							
PL	0.691	-0.288	0.905						
PP	0.281	-0.216	0.375	0.959					
PC	0.593	-0.303	0.693	0.291	0.945				
RM	-0.025	0.592	-0.153	-0.076	-0.171	0.928			
SD	-0.088	0.685	-0.279	-0.262	-0.323	0.621	0.873		
SO	-0.015	0.637	-0.178	-0.149	-0.214	0.675	0.646	0.901	
SI	0.036	0.476	-0.046	-0.013	-0.121	0.551	0.520	0.617	0.885

### 5.1.2 Validity

According to Fornell and Larcker (1981), convergent validity can be tested by average variance extracted (AVE) values. AVE attempts to measure the amount of variance that a latent variable component captures from its indicators relative to the amount due to measurement error (Chin, 1998). Proposed threshold value is: AVE > 0.50 (Hu et al., 2004). Table 4 and 5 both show that AVE score for every construct, ranging from 0.761 to 0.949, meets this requirement.

A generally accepted rule for assessing discriminant validity requires a latent variable to share more variance with its assigned indicators than with any other latent variable. Accordingly, the AVE of each latent variable should be greater than the

latent variable's highest squared correlation with any latent variable (Fornell & Larcker, 1981). Table 5 shows that the square roots of all the AVEs (i.e., the numbers on the diagonal) are greater than the correlations among constructs (i.e., the off-diagonal numbers), indicating satisfactory discriminant validity of all the constructs.

Furthermore, discriminant validity can be assessed by cross-loadings. Barclay et al. (1995) suggests that, as a rule of thumb, the item loading should exceed 0.70. In this study, the loading of each item meets the criterion (ranging from 0.825 to 0.982), as Table 4 and 6 demonstrate. Moreover, cross-loadings are obtained by correlating the component scores of each latent variable with other items. If the loading of each indicator is higher for its designated construct than for any of the other constructs, and each of the constructs loads highest with its own items, it can be inferred that the models' constructs differ sufficiently from one another (Chin, 1998; Gefen et al., 2000; Straub et al., 2004). Table 6 shows that all measurement satisfy the requirements.

Table 6. Examination of Cross-Factor Loadings									
	PD	PE	PL	PO	PC	RM	SD	SO	SI
PD1	0.950	-0.149	0.635	0.288	0.561	-0.033	-0.100	-0.037	0.040
PD2	0.956	-0.100	0.680	0.261	0.576	-0.026	-0.065	0.002	0.020
PD3	0.930	-0.081	0.623	0.258	0.534	0.013	-0.067	-0.009	0.046
PD4	0.952	-0.123	0.678	0.258	0.572	-0.045	-0.100	-0.013	0.030
PE1	-0.097	0.961	-0.240	-0.240	-0.279	0.590	0.668	0.606	0.468
PE2	-0.109	0.979	-0.288	-0.197	-0.292	0.575	0.661	0.630	0.460
PE3	-0.145	0.982	-0.312	-0.193	-0.313	0.565	0.672	0.625	0.464



<b>PL1</b>	0.641	-0.274	0.933	0.309	0.677	-0.132	-0.249	-0.150	-0.049
<b>PL2</b>	0.612	-0.252	0.924	0.345	0.645	-0.137	-0.267	-0.184	-0.040
<b>PL3</b>	0.637	-0.280	0.864	0.317	0.582	-0.199	-0.212	-0.146	-0.020
<b>PL4</b>	0.616	-0.236	0.899	0.386	0.602	-0.090	-0.281	-0.165	-0.056
<b>PO1</b>	0.246	-0.203	0.357	0.951	0.294	-0.075	-0.267	-0.192	-0.030
<b>PO2</b>	0.280	-0.199	0.383	0.966	0.302	-0.079	-0.256	-0.153	-0.039
<b>PO3</b>	0.287	-0.210	0.364	0.968	0.273	-0.060	-0.240	-0.105	0.018
<b>PO4</b>	0.264	-0.216	0.330	0.951	0.244	-0.080	-0.240	-0.120	0.004
<b>PC1</b>	0.519	-0.300	0.621	0.265	0.931	-0.176	-0.335	-0.205	-0.137
<b>PC2</b>	0.559	-0.277	0.657	0.298	0.955	-0.132	-0.321	-0.193	-0.093
<b>PC3</b>	0.578	-0.300	0.663	0.260	0.950	-0.174	-0.279	-0.221	-0.133
<b>PC4</b>	0.582	-0.268	0.678	0.276	0.943	-0.165	-0.287	-0.188	-0.096
<b>RM1</b>	-0.049	0.562	-0.134	-0.057	-0.176	0.930	0.565	0.624	0.508
<b>RM2</b>	-0.013	0.559	-0.154	-0.048	-0.146	0.943	0.579	0.607	0.493
<b>RM3</b>	-0.007	0.527	-0.137	-0.107	-0.155	0.909	0.584	0.647	0.531
<b>SD1</b>	-0.126	0.517	-0.266	-0.200	-0.305	0.596	0.825	0.546	0.406
<b>SD2</b>	-0.074	0.587	-0.178	-0.146	-0.286	0.511	0.851	0.535	0.452
<b>SD3</b>	-0.029	0.636	-0.232	-0.279	-0.250	0.527	0.910	0.602	0.503
<b>SD4</b>	-0.080	0.645	-0.298	-0.282	-0.289	0.538	0.901	0.570	0.450
<b>SO1</b>	-0.050	0.589	-0.205	-0.184	-0.260	0.515	0.574	0.863	0.589
<b>SO2</b>	-0.020	0.602	-0.166	-0.123	-0.198	0.655	0.627	0.938	0.546
<b>SO3</b>	0.031	0.526	-0.108	-0.095	-0.114	0.655	0.540	0.900	0.533
<b>SI1</b>	0.071	0.420	-0.008	-0.021	-0.091	0.484	0.451	0.550	0.925
<b>SI2</b>	0.030	0.378	-0.028	-0.029	-0.096	0.467	0.435	0.514	0.929
<b>SI3</b>	0.008	0.424	-0.089	-0.045	-0.092	0.448	0.469	0.521	0.915

At last but not least, all of the measurements used in this study were examined in advance by following Straub et al. (2004). To assess content validity, Straub et al. (2004) proposes two methods: literature reviews and pilot tests. This study addressed extensive literature reviews for the constructs in Chapter 2, and survey items were reviewed by three Ph. D. and ten master MIS students who have been using various OSNs as introduced in Chapter 4.

## 5.2 Common Method Variance

The problem of method biases has gained much scholarly interest in the behavior sciences. Common method variance (CMV) can be a problem in any single-source survey-based method biases from multiple source such as consistency motif and social desirability for self-reported data (Podsakoff et al., 2003).

To assess the common method biases problems in the survey design, this study used one of the most widely used approaches, Harman's single-factor test (Podsakoff et al., 2003). If a substantial common method bias exists, a single factor emerges or one general factor explains the majority of the total variance (Harman, 1976; Yun et al., 2011). This analysis revealed a total of 6 factors in the results. The data set of 244 OSN users produced 6 factors (78.683 %), and the first factor accounted for only 35.169 percent of the variance (Turel et al., 2011).

In this test, all variables in the theoretical model were entered into an

Exploratory Factor Analysis (EFA). EFA describes that measurement items should converge in the corresponding factor so that each item loads with a high coefficient on only one factor, and this factor is the same for all items that are supposed to measure it (Urbach & Ahlemann, 2010)

### 5.3 Structural Model Analysis

PLS uses bootstrapping method to assess the significance of path coefficients. In this study, 500 re-samples were created to test the hypotheses, and the results are summarized as shown in Table 7 and Figure 2. In PLS analysis, examining the  $R^2$  scores (i.e., variance accounted for) of endogenous variables and the structural paths assesses the explanatory power of a structural model. It is most desirable to measure the statistical power of PLS with  $R^2$  values of endogenous variables using at least 0.10 as the reference value (Falk & Miller, 1992). Other researchers, however, suggest that values of approximately 0.670 are considered substantial, values around 0.333 moderate, and values around 0.190 weak (Chin 1998). In this study, the model accounts for 7.9 to 58.8 percent of the variance ( $R^2$  scores), as shown in Figure 2. In addition, Table 7 shows that 6 paths are significant at the level of 0.001, and 3 paths are significant at the level of 0.05. Thus, the fit of the overall model is good.

Table 7. Hypotheses Testing Results.			
Path	Path Coefficient	t-value	Result

<b>H1a</b>	Perceived Enjoyment -> Self-Disclosure	0.354***	5.810	Supported
<b>H1b</b>	Relationship Management -> Self-Disclosure	0.202***	3.314	Supported
<b>H1c</b>	Showing Off -> Self-Disclosure	0.191**	3.121	Supported
<b>H1d</b>	Social Influence -> Self-Disclosure	0.106*	2.042	Supported
<b>H2</b>	Privacy Concern -> Self-Disclosure	-0.127**	2.988	Supported
<b>H3a</b>	Perceived Likelihood -> Privacy Concern	0.532***	5.373	Supported
<b>H3b</b>	Perceived Damage -> Privacy Concern	0.216*	2.040	Supported
<b>H4a</b>	Perceived Publicness -> Privacy Concern	0.031	0.468	Rejected
<b>H4b</b>	Perceived Publicness -> Perceived Likelihood	0.375***	5.157	Supported
<b>H4c</b>	Perceived Publicness -> Damage	0.281***	3.465	Supported

Note 1: Path significant \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

Note 2: Full Mediation effect was observed (PP -> PL -> PC, PP -> PD -> PC).

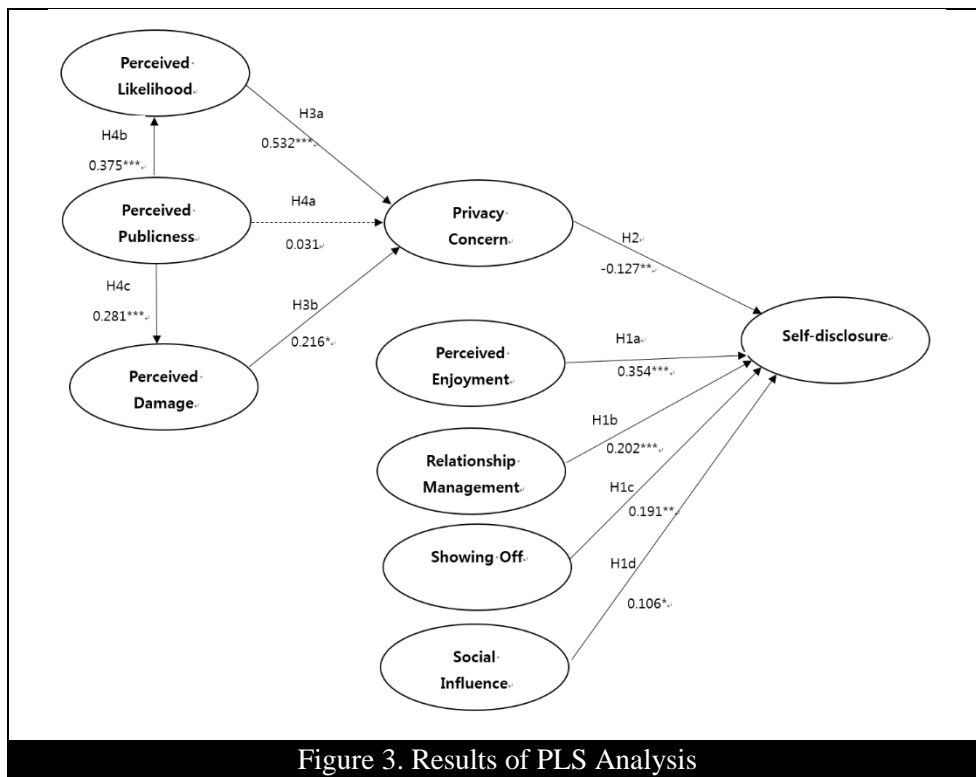


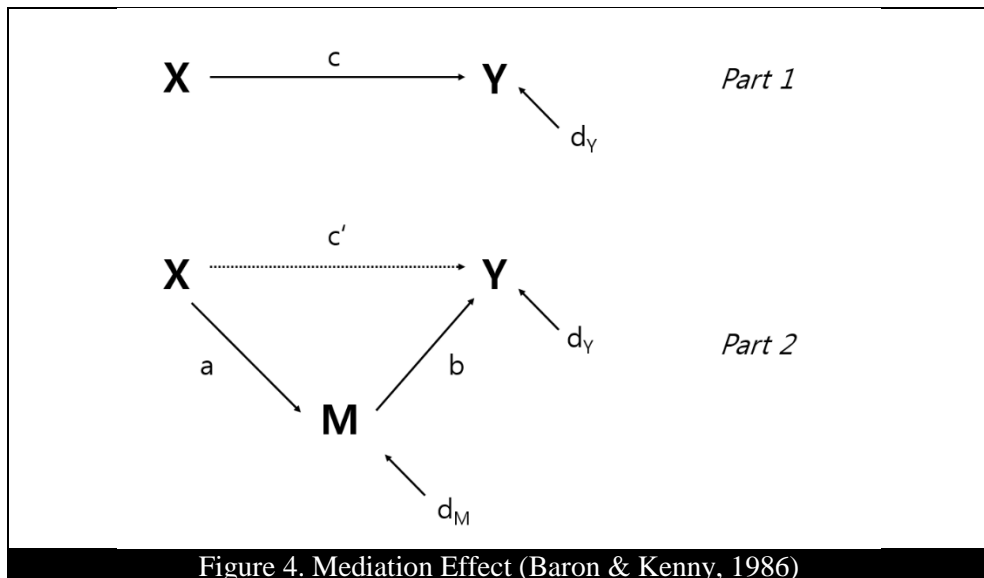
Figure 3. Results of PLS Analysis

Note 1: Path significant \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Note 2: Full Mediation effect was observed (PP -> PL -> PC, PP -> PD -> PC).

## 5.4 Mediation Effect Analysis

Baron and Kenny (1986) gives an explanation of how mediation effect can be tested statistically. Figure 4 explains the elements of the mediation analysis. Part 1 of Figure 4 suggests that a unit change in  $X$  is associated with a change of  $c$  units in  $Y$  when only  $X$  and  $Y$  are considered. Part 2 of Figure 4 presents a model that adds variable  $M$ , the proposed mediator. The mediation model  $M$  is affected by changes in  $X$ . The model also assumes that changes in  $M$  are associated with changes in  $Y$ , above and beyond the direct effect of  $X$  on  $Y$ . Consequently,  $X$  is said to have an indirect effect on  $Y$  through the mediator  $M$ . The size of the indirect effect is simply the product of the  $X$ -to- $M$  and  $M$ -to- $Y$  effects, that is,  $a * b$  (Shrout & Bolger, 2002).



Note: When mediation occurs, the  $c'$  path in Part 2 is smaller than the  $c$  path in Part 1, as indicated by dashed lines, Residual terms are displayed as  $d$  effects.

Mediation effect was tested by using the three-step method suggested by Baron and Kenny (1986). In the first step, the independent variable must affect the mediator in the first equation; second, the independent variable must be shown to affect the dependent variable in the second equation; and last, the mediator must affect the dependent variable in the third equation. If these conditions are hold in the predicted direction, then the effect of the independent variable on the dependent variable must be less in the third equation than in the second. According to Baron and Kenny (1986) and Kenny et al. (1998), if M is significant and IV is not significant, then M fully mediates the impact of IV on DV. However, if both M and IV are significant, then M partially mediates the impact of IV on DV. Table 8 shows the mediation effect test results.

Table 8. Result of Mediation Effect Test							
			Coefficient in Regressions				
IV	M	DV	IV -> DV	IV -> M	IV + M -> DV		Mediation
					IV	M	
PO	PL	PC	0.293***	0.375***	0.292	0.680***	Fully mediating
PO	PD	PC	0.293***	0.281***	0.135*	0.555***	Fully mediating

## CHAPTER 6 CONCLUSION

Drawing on Theory of Planned Behavior and Privacy Calculus Theory, this study theoretically articulates and empirically tests a model positing that benefits and risks affect OSN user's self-disclosure in their OSN. Table 9 summarized the results.

### 6.1 Research Findings and Discussion

#### 6.1.1 Benefits of self-disclosure on OSNs

This study confirms the presence of privacy calculus (Dinev and Hart, 2006) in individuals' self-disclosure behavior on OSNs by describing the 'concern – behavior' dichotomy shown in previous studies (Acquisti and Gross, 2006). It is found that the effect of both Privacy Concerns and Perceived Enjoyment is significant which means that both of the variables are considered importantly in the process of the self-disclosure decision.

In this study, several benefits of individual self-disclosure have been investigated. First of all, the result of this study shows that perceived enjoyment is an important determinant of self-disclosure. Although users recognize the fact that it is risky to disclose their personal information on OSNs, they still tend to open their information for fun. This demonstrates that OSNs are hedonic places where entertainment and enjoyment is provided to the users, and this pleasure motive leads users to continuously reveal their personal information.

Second, relationship management benefits arise as a result of distinguishable characteristics of OSNs providing users a function of ‘one click away’. This function gives users an opportunity to easily and efficiently update and report their news to a group of friends and acquaintances. A small post and comment on their or friends’ wall is a simple and good way to let people know how they are doing, and it helps to keep their interpersonal relationships.

Third, it is confirmed that people disclose their personal information to show others their ability and popularity on OSNs. This is consistent with the previous literature, which explains that some people are motivated to use their blog to show off and be famous in Web space for commercial purposes. Since OSNs are individuals’ personal space where they can expose themselves to others, they tend to post and reveal what they are good at and how popular they are.

Lastly, the result indicates that social influence plays a significant role in self-disclosure. This result is consistent with Lee (2008), which indicates that blog users open their private information in order to keep up with trends. This phenomenon is also prevalent in the specific context of OSNs, since a number of young users are likely to reveal their information and show themselves due to peer pressure.

Overall, the findings show that OSNs are becoming more entertaining and attractive in that it provides users a beneficial tool that helps to have fun, show off, manage interpersonal relationships, and follow social norms (social influence).



Table 9. Summary of Results		
Hypothesis		Result
<b>H1a</b>	The benefits of perceived enjoyment will have a positively influence on self-disclosure.	Supported***
<b>H1b</b>	The benefits of relationship management will have a positive influence on self-disclosure	Supported***
<b>H1c</b>	The benefits of showing off will have a positive influence on self-disclosure.	Supported**
<b>H1d</b>	The benefits of social influence will have a positive influence on self-disclosure.	Supported*
<b>H2</b>	Privacy concern will have a negative influence on self-disclosure	Supported**
<b>H3a</b>	Perceived likelihood of privacy threats will have a positive influence on privacy concern.	Supported***
<b>H3b</b>	Perceived damage from privacy will have a positive influence on privacy concern.	Supported*
<b>H4a</b>	Perceived publicness will have a positive influence on privacy concern.	Rejected
<b>H4b</b>	Perceived publicness will have a positive influence on perceived likelihood.	Supported***
<b>H4c</b>	Perceived publicness will have a positive influence on perceived damage.	Supported***

### 6.1.2 Risk perceptions of self-disclosure on OSNs

Predictably, privacy concern plays a significant negative influence on self-disclosure. Users try to decide the amount of self-disclosure on OSNs after calculating the privacy risks and threats they perceive. However, the influence of privacy concern on self-disclosure is lower than that of the benefits. This result explains that the rewards and benefits that they receive from disclosing themselves on OSNs weaken the perceived privacy concerns and encourage them to open more information.

Furthermore, privacy concerns are found to be a significant hindrance to self-

disclosure with perceived likelihood and perceived damage being significant antecedents. In this study, it is empirically shown that perceived likelihood has a stronger influence on privacy concerns than perceived damage, and therefore, plays a more significant role in the formation of privacy concerns. Due to the optimistic bias related to perceived likelihood, it becomes more obvious that users might not care about their privacy as much as they should. Also, users might misjudge perceived likelihood due to the lack of knowledge on the personal information accessibility, privacy rights and policy. Due to the misjudgment, users might become concerned with the risks that will not happen and ignore impending threats.

Finally, contrary to the expectation, this study finds that there is no significant relationship between perceive publicness and privacy concerns. However, perceived publicness has a significant impact on both perceived likelihood and perceived damage. This is an interesting point in that users think that negative events might happen more often and the damage will be larger if they perceive OSNs and their information public. However, they are not seriously concerned with their privacy although they consider their information and the platform public.

## 6.2 Implication for Research and Practice

### 6.2.1 Implication for Research

This study empirically identifies factors that affect self-disclosure on OSNs. It is found that perceived enjoyment, relationship management, showing off, and social

influence are significantly linked to self-disclosure. This results contributed to the ongoing research by indicating that, although privacy concern prevents self-disclosure, it is often offset by benefits perceived by the users. The findings indicate that OSN users involve in a process of privacy calculus when making a decision to open their information.

There have been numerous studies that investigated why users disclose their identifiable information such as name, gender, birthday, address, etc. However, there are not a lot of studies that explain users' self-disclosure which includes their voluntary post and photo uploads, highly private pictures and locations, and honest feelings and expressions on OSNs. Therefore, this study further explores the factors that have a key role in voluntary self-disclosure that is beyond the basic personal information.

### 6.2.2 Implication for Practice

Despite the increasing growth rates of OSNs, current statistics suggest that OSN users begin to lose their interest and become less active (Schmidt, 2008). In terms of this, the results of this study have some implications for practitioners and OSN providers.

From a beneficial perspective, the results show that OSNs should consider providing more opportunities and functionalities to the users. In particular, users tend to perceive that OSNs are beneficial for managing their interpersonal relationships. Therefore, OSN providers should enrich their core functionality of facilitating the

maintenance of relationships (e.g. birthday notifications and friends recommendation). Moreover, providers should facilitate relationship building among users by recommending them to each other. Also, they should focus on how to make users have fun by providing online games which can foster users' self-disclosure. This study found that OSN users tend to disclose themselves more actively when they want to show their ability and popularity. Thus, OSN providers should consider how they can provide better environment where users can show off and present themselves more easily.

On the negative side, OSN providers should understand that users' perceived privacy concern hinders self-disclosure. The results show that users tend to feel more concerned when they perceived that a negative event might happen as a result of self-disclosure. The more they think the perceived damage is big, the more concerned they are with their privacy. Furthermore, it is shown that users' perceived publicness on OSNs and their information revealed on their profile increases perceived likelihood and damage.

Therefore, to increase trust, OSN providers have to develop fair privacy policies and provide transparent and strict procedure for dealing with privacy abuse. More importantly, providers should prevent information collection by third parties and protect the OSN website from unauthorized access by unknown crawlers. Advertising campaigns should be considered in order to sustain a good image and show that the OSN is trustworthy. The most important way is that OSN providers behave in a consistent and trustworthy manner with the users.

## 6.3 Limitation and Future Research Direction

It can be considered that there might be other factors that can affect self-disclosure except for those investigated in this study. However, this study could not include these other constructs into the model. This is one of the shortcomings of this study and also can be future research. Furthermore, since most of the participants of this study are young users, this model can still be validated with more aged OSN users.

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## 국문 초록

### 페이스북상에서 사용자의 자기개방에

### 영향을 미치는 요인에 대한 연구

소셜네트워크서비스(SNS)가 등장한 이래 SNS는 더욱 빠른 속도로 성장해왔으며, SNS 사용자의 자기개방, 개인정보공개 등에 대한 많은 연구들이 진행되고 있다. 최근 페이스북, 트위터, 인스타그램, 카카오톡 등 다양한 종류의 SNS들이 인기를 끌면서 사용자들은 자신의 정보나 자기를 개방하는 일을 유행처럼 당연하게 생각하는 경향이 있다. 본 연구에서는 페이스북 사용자들이 어떠한 요인으로 인해 자신을 개방하는지에 대해 연구하고자 한다.

대개 사람들은 자신을 공개하기 전에 자기개방으로 인해 얻을 수 있는 이득과 위험을 고려한 후 이득이 더 높다고 여길 때 자신을 공개하는 경향이 있다. 자기개방으로 인해 얻을 수 있는 혜택으로는 크게 지각된 즐거움, 인간관계관리, 자랑 및 사회적 영향으로 구성되어있다. 반면 프라이버시 우려에는 지각된 가능성, 지각된 피해, 지각된 개방성으로 구성되어있다. 본 연구에서는 총 244개의 설문을 수집하여 PLS 구조방정식 모형 분석 방법을 통해 검증하였다. 분석 결과 자기개방의 혜택인 지각된 즐거움, 인간관계관리, 자랑 및 사회적 영향 모두 유의한 것으로 발견되었으며, 프라이버시 우려 측면에서는 지각된 가능성, 지각된 피해가 프라이버시 우려에 영향을 주는 것으로 밝혀졌다. 반면, 지각된 개방성은 프라이버시 우려에 유의한 영향을 주지는 않지만 지각된 가능성과 지각된 피해를 통해 조절효과가 있는 것으로 발견되었다.

본 연구에서는 SNS 사용자가 인지하는 혜택과 프라이버시 우려가 자기개방을 결정하는데 유의한 영향이 있다는 것을 밝혔고, 결정과정에서 혜택과 우려 중 더 큰 것에 기반하여 결정한다는 것을 알 수 있었다. 추후 연구에서는 사용자의 자기개방을 유도할 수 있는 즐거움에는 어떠한 요소가 있는지 알아볼 수 있을 것이며 이는 비즈니스 차원에서도 시사하는 바가 클 것이다. 또한, 페이스북 이외에 다른 소셜네트워크서비스상에서 사용자들이 어떠한 요인으로 자기개방을 하는지 설명할 수 있는 모델이 개발되기를 기대한다. 마지막으로 향후 연구는 SNS에서 자기개방에 영향을 미치는 요인을 추가적으로 밝혀낼 뿐만 아니라, 이러한 자기개방으로 인한 피해를 최소화할 수 있는 방향으로 나아갈 것을 기대한다.

주요어: 자기개방, 소셜네트워크서비스, 페이스북, 프라이버시 우려

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## Appendix: Survey Questionnaire (in Korean)

안녕하십니까? 설문에 참여해주셔서 감사합니다.

본 설문은 페이스북(Facebook)상에서 일어나는 개인 노출에 대한 연구에 필요한 실증 자료를 얻기 위한 것으로, 이와 관련한 사항들을 조사하기 위하여 작성되었습니다.

설문 조사는 익명으로 실시되며, 응답하신 내용은 비밀이 보장되고 조사결과는 오직 학술 목적으로만 사용됨을 알려드립니다.

본 설문은 어떠한 항목에도 정답은 없으며, 응답자께서 느끼고 생각하시는 대로만 모든 항목에 체크해주시면 됩니다. 부디 성의 있는 답변을 해주시길 부탁드립니다.

감사합니다.



자기 개방	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1) 나의 페이스북은 나를 잘 드러낸다.	①	②	③	④	⑤	⑥	⑦
2) 페이스북 타임라인이나 프로필에 나의 개인적인 정보를 자주 공개한다.	①	②	③	④	⑤	⑥	⑦
3) 페이스북에 나에 관한 글을 쓰는데 많은 시간을 할애한다.	①	②	③	④	⑤	⑥	⑦
4) 페이스북에 나에 관한 글을 자주 쓴다.	①	②	③	④	⑤	⑥	⑦

지각된 즐거움	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1) 페이스북에 나의 개인적인 정보를 공개하는 일은 즐겁다.	①	②	③	④	⑤	⑥	⑦
2) 페이스북에 나의 개인적인 정보를 공개하는 일은 재미있다.	①	②	③	④	⑤	⑥	⑦
3) 페이스북에 나의 개인적인 정보를 공개하는 일을 즐긴다.	①	②	③	④	⑤	⑥	⑦
4) 페이스북에 나를 개인적인 공개하는 일은 만족감을 준다.	①	②	③	④	⑤	⑥	⑦

인간관계관리	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1) 사람들과 친밀한 관계를 형성하기 위해 페이스북에 나의 개인적인 정보를 공개	①	②	③	④	⑤	⑥	⑦

한다.							
2) 사람들과 소통하기 위해 페이스북에 나의 개인적인 정보를 공개한다.	①	②	③	④	⑤	⑥	⑦
3) 사람들에게 내가 어떻게 지내는지 알리기 위해 페이스북에 나의 개인적인 정보를 공개한다.	①	②	③	④	⑤	⑥	⑦

자랑	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1) 내가 인기가 있다는 것을 보여주기 위해 페이스북에 나의 개인적인 정보를 공개한다.	①	②	③	④	⑤	⑥	⑦
2) 내가 잘 하는 것들이 무엇인지 보여주기 위해 페이스북에 나의 개인적인 정보를 공개한다.	①	②	③	④	⑤	⑥	⑦
3) 내가 하는 가치 있는 활동들을 보여주기 위해 페이스북에 나의 개인적인 정보를 공개한다.	①	②	③	④	⑤	⑥	⑦

사회적 영향	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1) 주변 사람들은 내가 페이스북을 통해 나의 개인적인 정보를 공개하기를 바란다.	①	②	③	④	⑤	⑥	⑦
2) 주변 사람들은 나의 개인적인 정보를 공개함으로써 내가 어떻게 지내는지	①	②	③	④	⑤	⑥	⑦

페이스북을 통해 알려주기 바란다.							
3) 주변 사람들은 페이스북에 올라오는 나의 개인적인 정보를 통해 나에게 대해 알고 싶어 한다.	①	②	③	④	⑤	⑥	⑦
4) 내가 페이스북에 나의 개인적인정보를 공개하는 이유는 주변 사람들이 그렇게 하기 때문이다.	①	②	③	④	⑤	⑥	⑦

프라이버시 우려	전혀 걱정되 지 않는 다	걱정되 지 않는 다	별로 걱정되 지 않는 다	보통이다	약간 걱정된 다	걱정된 다	매우 걱정된 다
1) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 그 정보가 예상치 못하게 이용될 수 있다는 사실이	①	②	③	④	⑤	⑥	⑦
2) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 그 정보를 내가 원하지 않는 사람이 볼 수 있다는 사실이	①	②	③	④	⑤	⑥	⑦
3) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 그 정보를 내가 모르는 사이에 누군가가 소장할 수 있다는 사실이	①	②	③	④	⑤	⑥	⑦
4) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 이 정보를 내가 모르는 사람이 볼 수 있다는 사실이	①	②	③	④	⑤	⑥	⑦



지금 이 순간에 당신의 페이스북에 이미 올려 놓은 정보와는 별도로 아래의 문항에 답해주시기 바랍니다. 당신의 페이스북에 이미 올려놓은 정보가 아니라, 지금 막 페이스북에 당신에 대한 정보(생일, 이메일, 연애상태, 관심사, 음악, 영화, 책, 사진, 장소 등)를 입력하려던 참이었다고 상상해보시기 바랍니다.

지각된 가능성	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇것 이다	그렇것 이다	매우 그렇것 이다
1) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 이 정보가 내 예상과 다르게 이용될 것 같다.	①	②	③	④	⑤	⑥	⑦
2) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 이 정보를 내가 원하지 않는 사람이 볼 것 같다.	①	②	③	④	⑤	⑥	⑦
3) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 이 정보를 누군가가 수집할 것 같다.	①	②	③	④	⑤	⑥	⑦
4) 페이스북에 나의 개인적인 활동(글, 좋아요, 프로필 등)을 올릴 때, 이 정보를 전혀 예상치 못한 사람이 볼 것 같다.	①	②	③	④	⑤	⑥	⑦

지각된 피해 (금전적, 사회적, 정신적, 명예훼손적)	매우 작을 것이다	작을 것이다	약간 작을 것이다	보통이 다	약간 클 것 이다	클 것 이다	매우 클 것 이다
1) 지금 페이스북에 올리려고 하는 나의 개인적인 활동(좋아요, 글, 프로필 등)이 내 예상과 다르게 이용된다면 그 피해가	①	②	③	④	⑤	⑥	⑦

2) 지금 페이스북에 올리려고 하는 나의 개인적인 활동(좋아요, 글, 프로필 등)을 내가 원하지 않은 사람이 본다면 그 피해가	①	②	③	④	⑤	⑥	⑦
3) 지금 페이스북에 올리려고 하는 나의 개인적인 활동(좋아요, 글, 프로필 등)을 누군가 수집한다면 그 피해가	①	②	③	④	⑤	⑥	⑦
4) 지금 페이스북에 올리려고 하는 나의 개인적인 활동(글, 좋아요, 프로필 등)을 전혀 예상치 못한 사람이 본다면 그 피해가	①	②	③	④	⑤	⑥	⑦

지각된 개방성	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이다	약간 그렇다	그렇다	매우 그렇다
1) 페이스북에서 생겨난 정보는 누구나 볼 수 있다.	①	②	③	④	⑤	⑥	⑦
2) 페이스북에서 생겨난 정보는 누구나 접근 가능하다.	①	②	③	④	⑤	⑥	⑦
3) 페이스북에서 생겨난 정보는 모든 대중들에게 열려 있다.	①	②	③	④	⑤	⑥	⑦
4) 페이스북에서 생성된 정보는 모든 대중들에게 개방되어 있다.	①	②	③	④	⑤	⑥	⑦

페이스북 사용자 특성에 대한 질문 (객관식은 택 1)

1. 연령	만 (     ) 세	2. 성별	①남 ②여	3. 학력	①고졸 이하 ②대학 재학 ③대졸 ④대학원 석사 재학 ⑤대학원 석사 졸업 ⑥대학원 박사 재학 ⑦대학원 박사 졸업 ⑥기타(                                     )
4. 직업	①고등학생 이하 ②대학생 ③대학원생 ④제조 ⑤유통 ⑥금융 ⑦방송 통신 ⑧ 정보기술 ⑨ 공무원 ⑩ 기타(                                     )				

**감사합니다.**